

### **Plains Leopard Frog *Rana blairi***

**Ecology:** The plains leopard frog is about 2.8 to 3.9 inches long. *R. Blairi* are brown or green, and have two or three irregular rows of dark spots on their dorsum. This species is often confused with the northern leopard frog (*R. pipiens*), but *R. Blairi* can be distinguished by the presence of a light spot in the middle of the tympanum, a distinct light line along the upper jaw, and dorsolateral ridges that are interrupted just anterior to the groin and medially. *R. Blairi* is usually found in streams, reservoirs, ponds, ditches and other bodies of water, is active at warmer temperatures and has a critical thermal maximum body temperature of 37°C (Frost and Bagnara 1977; Conant and Collins 1991; Bartlett and Bartlett 1999).

Breeding occurs from February to October. Most move from overwintering sites to breeding sites in the spring. Males engage in sexual displays on the ground. Breeding rates, although variable, seem to peak following rains. Eggs are deposited in still, temporary or permanent shallow ponds or pools and are light gray in color. In Oklahoma, most clutches found contained 4,000-6,500 eggs, but some consisted of fewer than 200 eggs. Hatching occurs in 5 to 20 days and larvae transform about three months after eggs are deposited. When clutches are laid in late summer or early fall, larvae may overwinter and wait until the following spring to metamorphose. Tadpoles are tan and nondescript without distinct color patterns (Kuhrt 2000).

The plains leopard frog feeds on a variety of insects. They mostly use the sit and wait strategy. Once prey items have been sighted, they will stalk and seize them. The plains leopard frog will also actively forage either terrestrially or at the waters edge. They often forage away from water at night after summer rains (Kuhrt 2000).

**Distribution:** The plains leopard frog is found throughout the Great Plains of the United States, from Indiana west across the central and southern plains to South Dakota, south to Colorado, New Mexico, and Texas, with a separate population in Arizona (Clarkson and Rorabauch 1989; Conant and Collins 1991; Blackburn et al. 2001).

The plains leopard frog's current distribution in Utah is the Wahweap area of Lake Powell (Figure 1). It inhabits the lake margins and perennial zones of Wahweap Wash. It is also found in the Utah Division of Wildlife Resources' rearing ponds, for the endangered Bonytail Chub (*Gila elegans*) and other warm water game species, at the Wahweap State Fish Hatchery (Bradwisch 2008).

**Pathways of Introduction:** *R. Blairi* was most likely introduced as an aquatic "hitchhiker" within boats launching at Wahweap marina. Possibly, *R. Blairi* occurs in the Wahweap area of Lake Powell due to releases by boaters and anglers who hauled frog specimens from Arizona as bait or even aquarium releases, since they are routine visitors to the Wahweap area of Lake Powell (Bradwisch 2008; Gustaveson 2008).

**Management Considerations:** Management of frog populations is difficult because of their juxtaposition to native species in shared aquatic habitats. Current control efforts range from removal of breeding adults to removal of all life stages. Adult frogs can be


removed by trapping or hand captures. However, most mechanical methods are only successful in small areas, with limited populations (Pitt and Witmer 2006). Tadpoles can be destroyed by draining ponds or chemical treatment (Pitt and Sin 2004). Fencing may also be used to reduce spread of frogs from infested habitats (Pitt and Witmer 2006). The efficacy of previous efforts, as it relates to reduction in population growth or cost-effectiveness, has not been well evaluated (Govindarajulu et al. 2005).

Fish distribution from the Wahweap State Hatchery is currently permitted. However, all loads are filtered to capture and remove tadpoles and frogs, as the fish are loaded into haul trucks (Bradwisch 2008; Gustaveson 2008).

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 Current Distribution of  
Plains Leopard Frog



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